To: Sandin, Peter[Ex. 6 - Personal Privacy] Hilton, Scott[Ex. 6 - Personal Privacy] Evans, Chris[Ex. 6 - Personal Privacy] McLeod, Iver [Ex. 6 - Personal Privacy] Liptert, Gail E[Ex. 6 - Personal Privacy]
From: Daly, Michael
Sent: Wed 7/20/2016 2:02:10 PM
Subject: FW: good summary article: PFOA, PFOS Likely Hazardous to Immune System: Scientists

Fyi...,

-----Original Message-----
From: Jennings, Lynne
Sent: Wednesday, July 20, 2016 9:09 AM
To: Cassidy, Meghan <Cassidy.Meghan@epa.gov>; Loughlin, Anni <loughlin.anni@epa.gov>; Lovely, William <Lovely.William@epa.gov>; Audet, Matthew <Audet.Matthew@epa.gov>; Daly, Michael <Daly.Mike@epa.gov>; Dolan, Jane <Dolan.Jane@epa.gov>; Keating, Carol <Keating.Carol@epa.gov>; Keckler, Kymberlee <Keckler.Kymberlee@epa.gov>; Lim, Robert <Lim.Robert@epa.gov>; O'Connor, Laurie <Oconnor.Laurie@epa.gov>; White, Kimberly <White.Kimberly@epa.gov>; Williams, Christine <williams.christine@epa.gov>
Subject: FW: good summary article: PFOA, PFOS Likely Hazardous to Immune System: Scientists

FYI

Lynne Jennings
U.S. EPA Region 1 - Office of Site Remediation and Restoration Five Post Office Square, Suite 100 (Mail Code: 0SRR7-3) Boston, MA 02109
617-918-1210

-----Original Message-----
From: Dain, Gregory
Sent: Wednesday, July 20, 2016 8:14 AM
To: Dierker, Carl <Dierker.Carl@epa.gov>; Downing, Jane <Downing.Jane@epa.gov>; Williamson, Timothy <Williamson.Tim@epa.gov>; Walsh-Rogalski, William <Walshrogalski.William@epa.gov>; Jennings, Lynne <Jennings.Lynne@epa.gov>; Zucker, Audrey <Zucker.Audrey@epa.gov>
Subject: good summary article: PFOA, PFOS Likely Hazardous to Immune System: Scientists

Risk Assessment

PFOA, PFOS Likely Hazardous to Immune System: Scientists Microscope Cartoon

Snapshot

• Two widely used, persistent chemicals hazardous to human immune system, NTP science advisers say

• Conclusions on PFOA, PFOS come as states, local water systems increasingly concerned about public exposure

By Pat Rizzuto

July 19 — Two chemicals that have made thousands of industrial and consumer products stick-, heat- and grease-resistant also are presumed to be hazardous to people's immune systems, a scientific panel said July 19.

A panel of epidemiologists, toxicologists, microbiologists and other scientists critiqued and then supported the National Toxicology Program's draft analysis that concluded perfluorooctanoic acid, more commonly known as PFOA, and perfluorooctane sulfonate, or PFOS, are presumed to be immune hazards to humans.

Legal, Water System Interest

The scientific panel's support for the toxicology program's conclusions come as the DuPont Co. and its spinoff, the Chemours Co., have been found liable in the first two of 3,500 lawsuits in which people claim their exposures to PFOA caused cancer and certain other health problems.

The panel's backing also comes as health officials in Alabama, New York, Pennsylvania and other states are investigating people's exposure to both chemicals in drinking water sources.

Just two months ago, on May 19, the Environmental Protection Agency released voluntary guidance for local water systems, states and others concerned about the highly fluorinated chemicals.

If drinking water concentrations for both PFOA and PFOS are kept below the EPA's benchmark of 0.07 micrograms per liter or 70 parts per trillion for a lifetime, the agency would not expect people's health to be harmed.

The voluntary benchmark level applied to the chemicals individually or in combination.

Products once made with chemicals produced through the use of PFOA and PFOS included food packaging, lubricants, water-resistant coatings and aqueous fire-fighting foams.

Production Shifted to Asia

Chemical manufacturers have stopped making both chemicals in the United States and much of Europe, Andrew Rooney deputy director of the toxicology program's Office of Health Assessment and Translation, said as he presented an overview of the program's draft conclusions.

Discharges of PFOA and PFOS also have been reduced as have concentrations of the chemicals in people's bodies, he said.

Yet, production of both chemicals appears to have shifted to Asia, Rooney said.

Another source of exposure may remain, he said. It is unclear whether certain chemicals called telomer alcohols, which can break down into PFOA and PFOS, have been eliminated or reduced, Rooney said.

Neither PFOA or PFOS degrade under typical environmental conditions, the toxicology program's draft systematic review said.

“Once in surface water, apparent half-lives of PFOS and PFOA are 41 and 92 years respectively. Estimated half-lives in the human body are also long, ranging from two to eight years,” the review found.

Similar Conclusion, Separate Considerations

The toxicology program and the peer review panel examined the scientific evidence on immune suppression separately for each chemical, even though similar conclusions were reached.

The strongest evidence that both chemicals could be hazardous to the human immune system comes from animal studies that showed the chemicals reduced the ability of large Y-shaped proteins, called antibodies, to fight viruses, bacteria and other microorganisms, the toxicology program and scientific panel agreed.

No one spoke during the panel's public comment period, although 3M and consultants working for it; the Endocrine Disruption Exchange, an non-governmental organization; and Michael Osterholm, director of the University of Minnesota's Center for Infectious Disease Research and Policy, submitted comments before the meeting.

Use of Systematic Review

Each of these commenters praised the toxicology program's systematic review as did the members of the peer review panel.

The systematic approach helped readers to clearly understand what science the program considered and the reasons some scientific studies provided higher levels of confidence while others were graded more moderate or lower priority in the program's final conclusions, the commenters and panel members said.

Several 3M commenters and others, however, said they had less confidence about some studies than did the toxicology program.

The peer review panel also raised concerns about some lines of evidence. For example, the toxicology program had concluded that animal studies showed a high level of support that PFOA cause allergic responses in the airways. The panel said the evidence provided only moderate support for that conclusion.

The panel, however, agreed with the bottom-line conclusion that PFOA and PFOS both could harm the human immune system.

To contact the reporter on this story: Pat Rizzuto in Washington at prizzuto@bna.com

To contact the editor responsible for this story: Larry Pearl at lpearl@bna.com

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Greg Dain
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 1
5 Post Office Square
Boston, Massachusetts 02109
tel. 617-918-1884
facsimile. 617-918-0884